

Mr. Shelby Hudgens
Unimin Corporation
P.O. Box 370
Aurora, Indiana 47001-0370

Re: Registered Construction and Operation Status,
029-11736-00022

Dear Mr. Hudgens

The application from Unimin Corporation, received on December 27, 1999, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following operations at the non-metallic mineral processing facility, to be located at 137 Franklin Street, Aurora, Indiana, are classified as registered:

- (1) Drying and Screening process, with a maximum capacity as claimed confidential by the source, using three (3) baghouses, identified as DC01, DC02 and DC05 as particulate control devices. This process also uses a rotary dryer, identified as DR01, with a maximum capacity as claimed confidential by the source.
- (2) Sweco, bagging and bulk loadout processes, with a maximum capacity as claimed confidential by the source, using one (1) baghouse, identified as DC04 as a particulate control device.
- (3) Sand system, with a maximum capacity as claimed confidential by the source, using one (1) baghouse, identified as DC03 as a particulate control device.

The following conditions shall be applicable:

- (1) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternate Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (2) 326 IAC 6-4 (Fugitive Dust Emissions)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), if fugitive dust is visible crossing the boundary or property line of the crushed stone plant, the source is in violation of the fugitive dust rule.
- (3) 326 IAC 6-3-2 (Process Operations)
The particulate matter (PM) from the drying, screening, sweco, bagging, bulk loadout and sand operations shall be limited using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The baghouses shall be in operation at all times the drying, screening, sweco, bagging, bulk loadout and sand operations are in operation, in order to comply with this limit.

This registration is a revised registration issued as a source-wide permit for the source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments

kt

cc: File – Dearborn County
Dearborn County Health Department
Air Compliance – Warren Greiling
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Unimin Corporation
Address:	137 Franklin Street
City:	Aurora, Indiana
Authorized individual:	
Phone #:	
Registration #:	029-11736-00022

I hereby certify that Unimin Corporation is still in operation and is in compliance with the requirements of Registration 029-11736-00022.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Unimin Corporation
Source Location: 137 Franklin Street, Aurora, Indiana 47001
County: Dearborn
SIC Code: 3295
Operation Permit No.: 029-11736-00022
Permit Reviewer: Kimberly Titzer

The Office of Air Management (OAM) has reviewed an application from Unimin Corporation relating to the construction and operation of a non-metallic mineral processing facility.

Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

- (1) Drying and Screening process, with a maximum capacity of 175,200 tons of Olivine per year, using three (3) baghouses, identified as DC01, DC02 and DC05 as particulate control devices. This process also uses a natural gas-fired rotary dryer, identified as DR01, with a maximum capacity 12.6 mmBtu/hr.
- (2) Sweco, bagging and bulk loadout processes, with a maximum capacity of 175,200 tons of Olivine per year, using one (1) baghouse, identified as DC04 as a particulate control device.
- (3) Sand system, with a maximum capacity of 175,200 tons per year, using one (1) baghouse, identified as DC03 as a particulate control device.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP-015-11-92-0141, issued on December 19, 1988; and
- (b) AA029-6639-00022, issued on October 4, 1994; and
- (c) R029-6221-00022, issued on August 26, 1996; and
- (d) Exemption 029-8656-00022, issued on March 24, 1998; and
- (e) AA029-6251-00022 (Transfer of Ownership), issued on February 3, 1999; and

All conditions from previous approvals were incorporated into this permit except the following:

- (a) AA029-6639-00022, issued on October 4, 1994

Condition: 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions

shall meet the following:

- (a) Visible Emissions shall not exceed an average of thirty percent (30%) in 24 consecutive readings.
- (b) Visible Emissions shall not exceed sixty percent (60%) opacity for more than a cumulative of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

Reason not incorporated: 326 IAC 5-1-2 language has been changed. Also, Dearborn county is an attainment county, therefore, thirty percent (30%) opacity should be forty percent (40%).

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (inches)	Flow Rate (acfm)	Temperature (°F)
DC01	baghouse	20	17.5 x 20.0	9,300	260
DC02	baghouse	44	20.0 x 20.0	9,700	ambient
DC03	baghouse	52	8.0 x 10.0	3,500	ambient
DC04	baghouse	48	10.0	1,200	ambient
DC05	baghouse	21	12.0 x 12.0	750	ambient

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 27, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.@

Pollutant	Potential To Emit (tons/year)
PM	3.0
PM-10	5.87
SO ₂	0.0

VOC	0.3
CO	4.6
NO _x	5.5

HAP-s	Potential To Emit (tons/year)
Single HAP	<10
Combined HAPs	<25

- (a) The potential to emit of particulate matter less than ten (10) microns (PM₁₀) is equal to or greater than five (5) tons per year, but less than twenty-five (25) tons per year. Therefore, the source is a registered source and subject to the provisions of 326 IAC 2-5.5.

County Attainment Status

The source is located in Dearborn County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Dearborn County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Dearborn County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 029-11736-00022, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part

60) applicable to this source.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternate Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), if fugitive dust is visible crossing the boundary or property line of the crushed stone plant, the source is in violation of the fugitive dust rule.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from each of the drying, screening, sweco, bagging, bulk loadout and sand operations shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouses shall be in operation at all times the drying, screening, sweco, bagging, bulk loadout and sand operations are in operation, in order to comply with this limit.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations.

Conclusion

The operation of this non-metallic mineral processing facility shall be subject to the conditions of the attached proposed Registration 029-11736-00022.